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ABSTRACT

Policy, as much as the merits of an individual proposal, determines which researcher gets how much money to do what kind of study. Federal money accounts for over 75 percent of all educational R & D funds expended. In the formation of federal educational R & D policy, there are two separate structural events--authorization and appropriations--influenced by the same three forces: (1) the Administration; (2) external groups and consitutencies; and (3) the House and Senate Committees and Subcommittees. Despite a somewhat gloomy picture at this point, many at the National Institute of Education, in Congress, and in potential constituencies are apparently convinced of the importance of education and of educational R&D. A recent analysis concluded that, maintaining even the present level of support for education, R&D will require a solid coalition of diverse interests and emphases among concerned organizations and a reconceptualization of the role of R & D which diversifies types of and sites for productivity, bringing the process of inquiry closer to the point of effective action in education. To improve the stability of policy direction and policy itself, the formation of a board similar in intent to the New York State Educational Conference Board, formed by representatives of the coalition is recommended. (Author/JM)

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February, 1975

How Much Money for What: Some Aspects of How Federal Educational Research Policy is Made and What to Do About It*

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On the average day, we answer six letters and three phone calls from educational researchers looking for money. About one in seventeen people finds it[1], yet few who receive discouraging letters understand why funds aren't available for their worthy research idea, or why the agency sets high priority on what the researcher may regard as less important studies.[2]

One doesn't have to be an educational researcher to be concerned with Federal educational R&D policy. Parents want the best education for their children, and worry about whether educational change is too fast, too slow, and if it's in the right direction. Other citizens are concerned with how well schools are achieving community, state and national objectives for education, and whether public investment is too high, too low, and being spent properly. Increasingly, as educational theory and educational research capability improve, these are the kind of questions which educational R&D can help answer, if there are funds for the right kind of studies, conducted in the right way by the most appropriate researchers.[3]

Researchers seem familiar with how proposals get reviewed. Considerable attention has been given to old boy (and girl) networks, invisible colleges, and what their influence may be on assessing the quality of individual proposals. While public examination of the contracting and granting processes may help maintain fairness, the role of policy deserves greater recognition.

Policy, as much as the merits of an individual proposal, determines which researcher gets how much money to do what kind of study, since policy affects how much total money is available for what kind of activity (basic or applied research, development, dissemination) on what topics (e.g., reading, bilingual education, discipline and motivation, school and finance) through what agency (e.g., universities, local or state educational authorities, non-profit corporations). Federal policy is particularly influential since Federal money accounts for over 75% of all educational R&D funds expended at the state levels, a higher proportion than for health, natural resources, transportation, or social services.[4] What, then, is national education R&D policy and how does it get made at the Federal level?

A Brief History of Federal Support for Education R&D[5]

In 1855, Henry Barnard published the first issue of the American Journal of Education, a periodical devoted exclusively to "...the History, Discussion, and Statistics of systems, institutions and methods of education." A year earlier, Barnard proposed that the Smithsonian Institution or some other agency appoint an official to "devote himself exclusively to the increase and diffusion of knowledge on the subject of education." When "An Act to Establish a Department of Education" passed in 1867, the first section defined the chief purpose of the new Department (later called a Bureau, then an Office, and now a Division) as "collecting such statistics and facts as shall show the condition and progress of education in the several states and territories and diffusing such information respecting the organization and management of schools and school systems, and methods of teaching as shall aid the people of the United States in the establishment of efficient school systems." Barnard was appointed first director of the Department.

For the next decades, the Department of Education surveyed colleges and universities, secondary schools, Black higher education, teacher training and school finance. These studies

were carried out by the national office, not through research funds dispersed to educational investigators. National policy for educational R&D during this period remained consistent with the responsibilities assigned to the Department in the Education Act of 1867.

Policy shifted after 1945. The application of basic research during World War II (for example, in the Manhattan project developing the atomic bomb) and the apparent importance of scientific knowledge in the cold war (for example, the 1957 Russian launching of Sputnik) stimulated Federal concern with increasing basic and applied research and improving research capability in many fields. As Table 1 shows, total Federal R&D expenditures rose from $7 million in 1940 to $17 billion in 1968.

Table 1: Total Federal R&D Expenditures, 1940 to 1973*

Fiscal Year	Dollars in Billions
1940	$ .07 billion
1948	.86 "
1950	1 "
1953	3 "
1958	5 "
1962	10 "
1968	17 "
1973	17 "

* Sources: National Institute of Education, Building Capacity for Renewal and Reform: An Initial Report on Knowledge Production and Utilization in Education. Washington, D.C. Mimeo, December 1973; Office of Dissemination and Resources, "Educational R&D System Statistics. I. Resources, Tables 1-9" National Institute of Education, Washington, D.C. Mimeo, September 1974; National Science Foundation, An Analysis of Federal R&D Funding by Function, 1963-1973, Washington, D.C., 1974; and Harold Orlans, D&R Allocations in the United States. Brookings Institution Reprint No. 273, Washington, D.C., 1973.

With regard to educational R&D, the Cooperative Research Act of 1954 activated Office of Education support for education research. The Course Content Improvement Program, also authorized in 1954, began the National Science Foundation's program of curriculum reform in the sciences. The National Defense Education Act of 1958 initiated Office of Education grants for program development in foreign languages, guidance, use of the media and technology. In subsequent years, the Cooperative Research Act was expanded through new legislation to address such specific educational problems as library research and development, vocational education and training, and education for the handicapped.

According to the authors of "Building Capacity for Renewal and Reform":

> "By 1963, the Office of Education's annual expenditure on research had grown to 14 million dollars and the NSF course content improvement program had reached 13 million dollars...the majority of proposals originated with members of the social science disciplines. The research agenda continued to be determined largely by the initiatives of individual researchers rather than those of Government policy makers. Projects tended to be quite small, typically one investigator with several graduate students. There was little action to build specialized institutional capacities, to encourage training of R&D personnel or to establish links between research and practice." (1973, p.9)

These latter functions---capacity building and institutional support, and building links between research and practice---were added to the Office of Education's research authorization between 1964 and 1969.

As Table 2 indicates, between 1969 and 1972, Federal support of educational research increased steadily. In 1972, the Federal obligations for educational R&D totalled $247.9 million, about 2% of the FY1972 federal education budget of $10.4 billion.[6]

In FY1973, about 50% of the total Federal R&D budget was allocated to national defense; space and health received about 11%; energy development, science and technology, natural resources, transportation and communications each received about 4%; education, income security and social services, community development and housing, economic growth and productivity received about 1% each, and crime prevention and international cooperation, about .5% each.[7]

Table 2: Federal R&D Obligations for Education Research and Development, FY1969 through FY1974, by Agency*
(Dollars in Millions)

Agency	FY1969	1970	1971	1972	1973	1974
Totals	$158.4	$151.6	$198.6	$247.9	$231.0	$202.4
NIE/HEW	-	-	-	-	106.8	75.5
OE/HEW	96.8	88.3	132.5	170.0	58.4	56.6
OCD/HEW	4.4	6.5	13.2	17.2	28.7	32.6
NIH/HEW	11.9	10.1	16.3	17.8	4.0	5.2
NSF	36.4	35.6	18.3	31.9	19.3	32.2
OEO	8.9	11.1	18.3	10.9	13.8	-

* Sources: National Institute of Education, Building Capacity for Renewal and Reform: An Initial Report on Knowledge Production and Utilization in Education. Office of Dissemination and Resources, "Education R&D System Statistics: I. Resources, Tables 1-9", National Institute of Education, Washington, D.C., Mimeo, September 1974.

While R&D funds increased from FY1969 to FY1972, particularly for the Office of Education, the apparent failure of social science research to deal with such pressing issues as compensatory education, desegregation school financing and educational equality led Congress, the Administration and at least some in the educational community to consider creating a separate agency for educational research. Daniel P. Moynihan, Presidential Assistant during this period, recalls,[8]

> "It's (the NIE's) origins go back to 1966 with the appearance of the Coleman Report. That survey destroyed two generations of beliefs about public policy and education. The Office of Education could do nothing with it. A colleague and I organized a faculty seminar at Harvard which spent two years examining the data... The overwhelming conclusion was that we know very little about the processes whereby resources mix with students and produce education, or do not... The time had come for long-term, sustained controlled research. The proposal was put forward in a presidential message of March 1970. After very considerable deliberation, Congress enacted the measure two years later."

Thus, federal commitment to educational research and development culminated in the establishment of the National Institute of Education as a separate Federal agency in August 1972 under legislation sponsored by Representative John Brademus. The Institute's initial program consisted largely of R&D projects transferred from the Office of Education and the Office of Economic Opportunity. Sponsors of the Institute envisioned rapid growth:[9]

> "Mr. Meeds: Do you have any suggestions as to what the level of funding of the National Institute of Education ought to be?
>
> Mr. Moynihan: I believe it would begin at about $115 million a year, a good part of which would be brought from existing expenditures... I would certainly hope to see... at least a quarter billion dollars a year on educational research if we are going to spend $65 billion a year on education.

Mr. Brademus: I believe Dr. Levien of the Rand Corp. who did the study commissioned by the Administration on NIE suggested that by early 1980 we should be spending $1.1 billion."

Along with the expectation of substantial growth in Federal educational R&D funds went a change in policy. The Institute's authorizing legislation, the Education Amendments of 1972, declared it to be a policy of the United States to:

(i) "Help to solve or to alleviate the problems of, and promote the reform and renewal of, American education;

(ii) Advance the practice of education as an art, science and profession;

(iii) Strengthen the scientific and technological foundations of education; and

(iv) Build an effective educational research and development system."

This mandate built on the spirit of the Act of 1867 in declaring the right to equal educational opportunity to be a policy of the United States and in reasserting the role of research in improving American education. In addition, the policy reaffirmed the importance of education as a profession and of building individual and institutional capacity for educational research. Finally, the legislation advanced beyond previous policy to include helping solve the problems of all educational programs as an arena of Federal responsibility.

Since 1972, however, Federal support for education R&D has decreased from $247.9 million total to $202.4 million in FY1974. The Institute's appropriations decreased from $110 million in FY1972 to $70 million in FY1975.[10] At the same time, total Federal educational outlays have increased from $6 billion in 1969 to over $12 billion in FY1974. Thus although the Federal government is spending more than ever on educational services, support for educational research has declined. Total Federal support for education R&D in 1969 constant dollars was lower in FY1974 than in FY1969.

The decline in funds and in Congressional enthusiasm for educational research is not unprecedented. Clark reports that on July 20, 1868, less than two months after the first director of the new Department of Education submitted his first annual report to Congress, "the appropriation to the new agency was reduced from $12,000 per year to $9,400 and the appropriations act further undercut the status of the agency by reassigning it as an Office in the Department of the Interior."[11]

One of Barnard's successors, John Tigert, commented:

> "It is clear that the expectations of some Congressional advocates of the Department of Education were not realized. It is no wonder. In fulsome speeches it has been proclaimed that the Department of Education would exert a powerful influence to enlighten the mass of ignorance in the nation, particularly among the freedmen of the South. Two years passed, and the Commissioner of Education with his three clerks had failed to cause the enlightenment of the four million freedmen or to show any appreciable reduction in the sum total of ignorance in the country at large. It was disappointing to the enthusiasts, and the reaction had its natural effect."[12]

Unable to restore Congressional confidence in the new Department and faced with rising criticism, Commissioner Barnard resigned after serving less than two years.

Testimony before Congress establishing the NIE avoided fulsome promises; speakers rather emphasized the slow, high risk and long-term nature of educational research, urging a 15 to 20 year perspective in judging the success of the Institute. Despite the greater caution in 1972 than in 1867, Tigert's comments could apply to the present; after serving less than two years, the first director of the NIE, Dr. Thomas K. Glennan, Jr., resigned on October 31, 1974.

Why the Vicissitudes of NIE?

At least four explanations of the recent history of Federal support for education R&D have been offered:

o Skepticism: NIE as a species is believed by some to be suffering the consequences of more general skepticism about the value of social R&D as class and educational R&D as a genus. This view is consistent with the decline in educational R&D funds for the Office of Education and the National Science Foundation, the decrease in Congressional support for the National Institute of Health intra and extra-mural research programs, and the controversy between advocates of applied, mission-oriented studies restoration of a long-term, larger-scale program of basic research in the social, biological and physical sciences.[13]

o Chance: In other views, the NIE is regarded as among the victims of a combination of unfavorable circumstances, few of which could have been foreseen. These circumstances include the crisis in Administration leadership, delays in appointing key agency personnel and in filling high level vacancies, and the unexpectedly high demands on the agency for managing the $90 million of programs transferred from the Office of Education.

o Ambiguity: Education is in some ways an anomalous investment for the Federal government. It is not a right graranteed by the Constitution. States are historically responsible for whatever education they see fit to provide to their citizens. Most Office of Education R&D money flows to the states according to formula grants.[14] While the Office of Education retained all such formula grant R&D programs, some observers have felt that interpretations of the intent of Congress emphasizing distribution of NIE funds to state and local educational authorities would have reduced much criticism directed at the agency.

o Innocence: Agency leadership failed to understand or underline the Federal policy-making process, in terms of both structure and dynamics.

While the first three explanations are all plausibly related to recent Federal R&D policy, examination of the fourth explanation may offer the greatest opportunity for those concerned with such policy to do something about it.

The Structure of How Federal Educational R&D Policy is Made with NIE as an Example

There are two separate structural events--authorization and appropriations--influenced by the same three forces: (1) the Administration, including the White House, the Office of Management and Budget, Cabinet level forces, and forces within the Department and Agency; (2) external groups and constituencies; and (3) the House and Senate Committees and Subcommittees, who sits on them, the distribution of power among them, and the attitudes of individual members of Congress toward educational R&D, which can powerfully influence the final vote on the floor of Congress.

(1) Authorization is the enabling legislation of an agency such as NIE, setting forth the mission, purpose, activities which legally may be carried out in implementing policy, organizational relationships and primary structure such as Presidential appointees, and whatever special missions, foci or procedures Congress intends. The House and Senate subcommittees with oversight of educational R&D authorization are composed of different members than are the subcommittees responsible for appropriations. The former initiate policy subject to the approval of Congress and the President, while the latter determine how well the agency has carried out the policy and what monies are justified for what specific programs. The authorization committee sets the upper limit for agency expenditures during the period of authorization; the appropriations committee cannot exceed these but may approve substantially less than the authorized upper limits. Thus, NIE had a $550 million authorization for the first three years but a total appropriation of $255 million.

As an example of the impact of provisions in authorizing legislation, NIE's legislation calls for a National Council on Education Research as the policy-making body. This feature is unique in Federal legislation. Some other agencies have advisory councils

but not policy-making councils without whose prior approval, NIE activities and expenditures are illegal. One ramification of this provision has been the time necessary to establish what is and what is not a policy decision requiring prior council approval.

Another aspect of this legislative feature is the vulnerability of the NIE to delay in appointing the Council and to Council turnover. For almost nine months, the Institute had to operate without a Council; the first official meeting of the Council was not held until July 10, 1973. Consequences included: (a) embroiling the infant Institute in a lawsuit challenging the legality of any action without a Council, (b) reluctance to move ahead in building constituencies and modifying or developing programs without the approval possibly legally required, (c) Institute inability to spend all of its FY 1973 funds due to delays in grant announcements and awards pending clarification of Council status, and (d) eventually, Congressional appropriations rejection of a Council approved FY1974 supplemental budget request on the grounds that the Institute was slow to get started and hadn't spent all of the FY1973 funds appropriated for it.

(2) Appropriations: Authorization hearings may be required yearly, bi-yearly or at longer intervals depending on the intent of Congressional authorization committees setting up the original legislation. Appropriations hearings are held yearly since the Federal budget is approved on a year-to-year basis. The appropriations subcommittees therefore are responsive to changes in the economy and to Administration and Congressional priorities, some of which may not be entirely compatible with the authorizing legislation. If it were possible to initiate, fund and complete R&D in the maximum 18 months allowed for one funding action, R&D would be relatively well adapted to the appropriations cycle. Many problems arise because of the incompatibility between the long-term nature of most R&D and the short time cycles of appropriations.

It frequently happens that an agency's budget has not been approved by Congress and the President before the start of a new fiscal year. Congress usually passes a continuing resolution, permitting the agency to spend up to but not beyond the previous year's appropriations. New programs may not be initiated during a continuing resolution. For example, the Institute received its FY1975 appropriation in December 1974. Until the appropriation was received, the agency did not obligate all funds required in FY1975 for projects whose continuation awards fell due in the first two quarters lest it be overcommitted and have to enforce a sudden end-of-the- fiscal year cut in obligated funds, as the NIE once had to do to the dismay of its grantees. The NIE now has six months to obligate FY1975 appropriations. This is not too difficult with the low budget. It will still mean for the one FY1975 grant announcement the short time many researchers deplore between publication in the Federal register and the deadline for receipt of proposals.

Another consequence of the yearly appropriation cycle is the time required to prepare budget submissions and the toll on staff and researcher morale. This is not unique to educational R&D although it may be more severe due to the sequential nature of many research studies, and the difficulty of building a convincing case for a certain research direction for FY77 when findings from the precursor studies won't be available until June 1975. We began our FY1976 budget planning in March 1974, and are now fine-tuning the budget for appropriations committee hearings while starting the detailed justifications needed for the FY1977 budget, justifications which must assess the present knowledge base and examine almost to the dollar the costs and merits of alternate R&D projects in the priority areas established by the National Council. A few weeks ago, for example, we spent much time trying to assess the increment in sex-fair occupational awareness that might come from 10 5-minute TV segments at $50K per segment vs 5 10-minute TV segments at $75K per segment, since the $225K extra required by the 10 segment approach had to be justified against competing claims.

Structurally, an appropriation goes through a minimum of ten steps:[15]

(1) Within each NIE division, staff recommend studies to the Division Director who must balance recommendations against his/her sense of the intent of Congress, NCER policy, acceptability to the Administration and external constituencies, staff capability and professional judgment on educational R&D

(2) The Division budgets are reviewed by the Institute Director and her/his advisors against similar criteria

(3) The budget is presented to NCER and is often revised several times prior to approval, repeating steps 1 and 2

(4) The approved budget is presented to the Assistant Secretary for Education

(5) to the Secretary of DHEW

(6) to the Office of Management and Budget and the White House

(7) to the separate appropriations subcommittees in the House and the Senate who present their recommendations to

(8) their respective committees, who then report

(9) to the floors of the House and the Senate.

If the House and Senate disagree at step (9), the House/Senate joint subcommittee meets. The recommendations of the joint subcommittee meetings are entered into the appropriations bill without further review by the Committees or the Floor. The bill then goes

(10) to the President, who may or may not approve.

At any step, priorities and budgets may change, often quite dramatically, and the level of detail on which a vote may hinge ranges from the quality of project monitoring to questions such as whether special R&D attention to bilingual education is

required since generations of immigrants assimilated without the assistance of educational R&D.

As examples, in the FY1975 appropriations subcommittee hearings on the Institute's budget, the following questions were asked:

o Could you give me an example of some of the programs that you dropped because experience has indicated to you that they do not make a fair return on the taxpayers' investment?

o Are Indians involved?

o It is not necessary to run an experimental course to instruct that man (educational administrator) how to employ teachers, is it? I am talking about the people supervising and in those instances you have highly trained people who are thoroughly aware of the problems presented by these conditions. Is that not right?

o Has a system been developed whereby the teacher can keep track of the individual progress and the individual traits of students without reducing the total number of the class?

o What efforts are currently underway to secure a new sponsor with full funding to assume the program's administration and operation at the end of the NIE committment?

o If educators can not disseminate information among themselves how will adding another governmental agency to the process help in any way?

o What is it about Rocky Mountain children that they can not choose a career without assistance from a satellite?

The satisfactoriness of answers at each step, and critical or favorable testimony from constituencies in large part determine how much money is available for what.

The Dynamics of Education R&D Policy

The dynamics of Federal Education R&D policy seem to be similar to those of other Federal policies: they are formed by advocacy and compromise among people and groups with different interests who may find enough communality to shelter their goals under the umbrella of a given policy or program, or find enough inimical to their interests to force redirection or abolishment.

This by no means implies that the government moves by greed and self-interest. There are many urgent problems, and few people can see all sides of every problem. Analyst of the process have concluded, however, that the convictions of the individual researchers may most influence policy through groups or organizations representing large or well-organized constituencies.

Some examples may illustrate these dynamics in the case of NIE:

o Twenty of the Laboratories and Centers for education research funded by the Office of Education in 1964 and 1966 formed the Council on Educational Development and Research (CEDaR). Seeing Federal support shift from institutions to programs, and, it feared, to individual projects competing for funds with all other applicants, CEDaR threatened to withhold support for the NIE or lobby against it, if the FY1975 budget did not include a fairly large sheltered competition for dissemination funds. The issue here is a Federal policy of building capacities and institutional supports and whether groups perpetually writing proposals for scarce funds can maintain the quality of staff or continuity of effort believed required for centers of R&D excellence. CEDaR feared the labs and centers would become little more than contract-dependent organizations if they survived at all.

o The Council of Chief State School Officers, disappointed by lack of NIE funds going to the states and what they perceived as a basic research emphasis remote from the problems of American education, gives a similar ultimatum regarding a sheltered state competition for dissemination funds. The FY1976 budget has a sheltered competition involving cooperation between CEDaR and similar technical assistance groups ($4.4 million) and the states ($5.3 million). These will be projects related to state needs in areas such as reading and education and work.

o Congress wants evidence that the R&D investment has been worthwhile. Since both development and research have long time lines before something is produced, investment in dissemination and in short-term products such as handbooks or policy analyses become more attractive budget choices than the expensive developmental programs or the basic research projects whose titles are easy to question as irrelevant to educational problems.

o The American Educational Research Association until recently has had an apolitical stance. AERA would seem to be a natural constituency for NIE, but the organization as a whole has not effectively supported the Institute. This has suggested to some observers that there are relatively few competent educational researchers and that most of these can find enough funds elsewhere. In turn, this line of argument implies that building a constituency requires enough concentration of resources in one agency to create an interdependency, much as NIH is interdependent with the medical research community.[16] The Institute had only about 3/8 of the total Federal dollars for R&D in FY1974 ($75.7 million for NIE v. $191.1 million for all other agencies), which may not be enough for constituency development.

o The National Education Association and the American Federation of Teachers, whose membership is largely practitioners have urged sheltered competitions for schools and a developmental-applied emphasis. Although NEA and AFT have some of the most effective lobbies in town and well-organized constituencies, their attitude

toward NIE and some of its transferred programs such as the OEO Voucher Experiment in Alum Rock, California, has been more critical than enthusiastic.

The priority studies recommended by the many individuals and interest groups whose opinion the Institute has solicited and who have come to the Institute to discuss their concerns fill over 15 single-spaced pages of recent testimony before Congress. Listening to what various constituencies have to say is an essential step, but one that must be followed with action in terms of revision of priorities and budgets. The fragility of relationships between an agency and various interest groups was illustrated for us in a recent incident; we have been told that our relationships with an important group, has been "almost destroyed" because an agency grantee published a report regarded as unjustifiably critical of vocational education.

Despite the somewhat gloomy picture to this point, many at the Institute, in Congress and in potential constituencies are apparently convinced of the importance of education and of educational R&D.[17] Achieving an educational R&D program that builds on the new policy of the Educational Admendments of 1972 and gives education R&D a fair chance to contribute to educational improvement and reform seems possible, but not easy.

Clark, in his thoughtful analysis, concludes that maintaining even the present level of support for education R&D will require "a solid coalition of diverse interests and emphases among organizations representing practitioners, administrators, researchers, students and parents, and a reconceptualization of the role of R&D which diversifies types of and sites for productivity, bringing the process of inquiry closer to the point of effective action in education."[18] Such a coalition in approaching Congress should emphasize,according to Clark, not how stingy Congress has been to date, but products that are attractive and

interesting; data about the number of children in each Congressional district who are using the materials; and testimony from all types of agencies in Congressional districts who are participating actively in programs of research, development and diffusion.

To improve the stability of policy direction and policy itself, Clark recommends a board similar in intent to the New York State Educational Conference Board, formed by representatives of the coalition. The purpose of the board would be to formulate a national policy and action platform for education R&D. Such a board, he urges, would help offset the stop-start-change direction that has characterized the history of educational R&D to the extent that this is due to shifts in agency and department leadership and short-term institutional memories.

Such a coalition model might well improve Institute chances for survival and growth, and open policy debate more to the public. On the other hand, centralization of both power and responsibility implicit in the coalition model may reduce the possibility of solving relevant education problems, if these are unpopular to examine (as in the case with educational vouchers) or require longer-term investment in basic research and in studies of the knowledge-building process.[19]

The most direct counter-balance to excessive influence of large organizations or a coalition may be individuals concerned with education and the quality of educational research. While much about the policy-making process argues for paying one's yearly dues to the most congenial lobbying organization, the influence of the individual researcher, parent and citizen may be an underutilized resource. Both within the Administration and Congress, individuals who present their cases with knowledge and conviction usually get a hearing, and may be asked back as an informed witness or member of an influential group. While many responsibilities and loyalties vie for our time, the willingness of individuals to become informed and to make their views heard over the many months required to shape and sustain policy may be in educational research as in other areas, the determining factor in improved policy.

FOOTNOTES

* Paper presented at the American Association for the Advancement of Science meeting, New York, January 29, 1975. The opinions presented are those of the authors. Endorsement by the National Institute of Education (NIE) should not be inferred. The help of Robert W. Stump, Chris Lotze, Richard Werksman, Rolf Lehming, Lila Carol, Michael Hock, Bruce Craig and Ward S. Mason is gratefully acknowledged.

1. In FY1974 in response to a research grants announcement, NIE received 2,093 propectuses, invited 419 proposals and funded 73 grants totalling about $5 million; 6% of the prospectuses and 18% of the proposals were funded. According to reviewers, more worthy projects were submitted than there were funds to support. The 1:17 ratio is probably an underestimate, omitting researchers whose interest were not close enough to the five priority areas announced to submit prospectuses, those who didn't learn about the grants announcement too late to apply, and those who didn't connect at all with the potentially interested agency. If principal investigators rather than prospectuses are counted, about 2,888 researchers applied for NIE support, 105 of whom received awards, a ratio of 1:28.

2. See, for example, the letter to the Honorable Warren G. Magnuson from Emerson Shuck, President of Eastern Washington State College, as reported in Senate Hearings before the Committee on Appropriations, Labor-HEW Appropriations, HR8877, Fiscal Year 1974, Part 4, pp. 4196-4197 (U.S. Government Printing Office, 1973). Dr. Smuck writes, "We recently received a letter from the National Institute of Education denying funds for an educational research proposal. While we do not question the decision on this proposal, we were surprised by the explanation that some 3,000 proposals were received, one quarter reviewed, and one quarter of those approved for funding...It is difficult to believe that support of educational research has declined so drastically that less than 7 percent of applications from the nation can receive Federal approval...We greeted the formation of NIE with reservation, as you will recall, fearing that it might turn out to be simply a channel for the best established educational research persons from those institutions which have already benefitted most from Federal research support.

We do not know that this is so but conclude on the evidence of the attached letter (from NIE) that NIE has proved to be an effective instrument for stifling broad participation in educational research."

3. The March 7, 1973 "Partial Bibliography of Reports Related to the National Institute of Education" (Appendix C, National Institute of Education, mimeo) lists 65 papers, speeches and reports. Many of these examine the limitations of educational R&D as well as project agendas of significant questions which R&D can reasonably expect to answer. See particularly, Amitai Etzioni, An NIE Strategy Paper, July 1972; Willis W. Harman and Thomas C. Thomas, Crucial Role for the National Institute of Education, February 1971; Senta A. Raizen et al., Research and Development in Education: Analysis and Program Development, August 1972, and "To Establish A National Institute of Education", hearings before the House Select Subcommittee on Education, (U.S. Government Printing Office, 1971).

4. Office of Dissemination and Resources, "Educational R&D System Statistics, I. Resources, Table 1-9". National Institute of Education, Mimeo, September 1974, Table 6. See also Harold Orlans, D&R Allocations in the United States. Brookings Institution Report No. 273, Washington, D.C., 1973.

5. This section is paraphrased and quoted from Lee J. Cronbach and Patrick Suppes (Eds.) Research for Tomorrow's Schools. Report of the Committee on Educational Research of the National Academy of Education. London: The Macmillan Company, 1969, pp. 31-59. See also Roger E. Levien, An Agenda for Education Research and Development, Part II, "Education R&D, Past and Present", Chapters 7 and 8. RAND Corporation, Draft mimeo, August 1974; and David L. Clark, Federal Policy in Educational Research and Development, Graduate Lecture delivered at the Center for Vocational Education, the Ohio State University, August 1, 1974.

6. Orlans, op. cit. and Office of Dissemination and Resources, "Educational R&D System Statistics, I. Resources, Tables 1-9", National Institute of Education, Washington, D.C., Mimeo, September 1974.

7. The Department of Defense's budget for education, training and education research totals about $80 billion. Figures on what percentage of this goes to educational research are not available. The Defense education-related budget is not included in either educational R&D or total Federal education expenditures cited in the text; these data are for non-defense agencies only. The Departments of Labor and Agriculture also have some education-related R&D and service programs but these are not usually included in estimating the total educational allocations.

8. Daniel P. Moynihan, Letter to the Editor, The Wall Street Journal, July 8, 1974.

9. "To Establish a National Institute of Education", Hearings before the House Select Subcommittee on Education, February 18, 1971, p. 19. (U.S. Government Printing Office, 1971)

10. The agency's FY 1973 appropriations were $110 million, of which $106 million was obligated by June 30, 1973 the close of the fiscal year. In FY1974, the Institute requested $162.2 million. The House cut this request by $20 million "based on the fact that NIE was late in getting started and therefore could not effectively use all the money requested." The Senate reduced the budget to $75 million, which became the FY1974 figure. The Administration then requested a $25 million supplemental appropriation for NIE for FY1974, which was refused by both the House and Senate, the Senate noting, "The Committee sees no reason to reconsider the level of funding decided by Congress just a few months ago. The Committee suggests that the agency use the time available to re-examine all its existing projects and propose new activities in order to strengthen the justification for the FY1975 budget request." The Institute requested $134.5 million for FY1975. The House subcommittee on appropriations voted $100 million which was cut on the floor of the House to $80 million. The Senate subcommittee voted a $0 budget for FY1975, which was increased to $65 million on the floor of the Senate. In the joint House-Senate Subcommittee meeting, the appropriation for FY1975 was set at $70 million, enough for the Institute to approach its $80 million committment base of continuing projects with a 15% across the board budget reduction for many

projects and closing out others. The picture for FY1976 is unclear. As of this writing, the Institute has requested an $80 million budget, if the Congress continues the Institute whose initial three year authorization must be renewed by August 1, 1975. Sources: Senator Magnuson before the Committee on Appropriations, HR-8877, 93rd Congress, First Session, 1974, Part 4, pp. 3859-4238. U.S. Government Appropriations Bill, 1974. Report of Mr. McClellan from the Committee on Appropriations, Report No. 93-814 and Report of Mr. Mahon, from the House Committee on Appropriations, Report No. 93-977, pp. 71 and 64-65, respectively. U.S. Government Printing Office, 1974.

11. See Clark, op. cit., pp. 9-12, for a history of the shifts in Federal support for educational R&D; quote is from p. 15-16.

12. J.T. Tigert, "An organization by the teachers and for the teachers", School Life, 9, May 1924, p. 196, cited in Clark, op. cit.

13. The December 1974 American Psychological Association Monitor (Vol. 5, number 12) reported, for example, "while the National Science Foundation has been proposed a record high budget boost totalling almost $768 million for the current fiscal year, the near $100 million increase over last year's figure has no effect whatsoever on the agency's social science area. Funds earmarked for social science research are remaining at last year's level of $41.8 million. Observers expressed very little surprise over the omission of social sciences in the Foundation's rising budget trend. Senator Proxmire's sharp attack on NSF's social science research projects during Senate Appropriations Subcommittee hearing generated serious doubts on Capitol Hill. As a direct result, NSF's social science division request for $29 million was denied."

14. Whether or not an agency distributes funds through formula grants is determined by Congress, not the agency. In a formula grant system, usually 50% of the appropriate funds go to the state educational authorities as their direct responsibility, the distribution of funds being proportionate to the eligible population of the state. The remainder, while spent through the Federal government, must also be distributed according to formula, regardless of the merits

of individual proposals across states. Thus, for example, in one competition, American Samoa can not receive much more than $1,500 for an educational R&D study although it also can not receive less as long as a single proposal is submitted while a state such as California may receive several hundred thousand dollars, as long as there are enough proposals from the state to absorb these funds. Within states, of course, the more highly rated proposals are funded first.

15. W.W. Markley (Stanford Research Institute) in an interim (1975) report on the Normative Structure of knowledge Production and Utilization in Education found that the budget process of a large urban school district required 39 steps from preparation of enrollment forecasts (1) to approval of adjustments in the final budget (39) and took a full year. The U.S. Office of Education planning and budget cycle, Markely reported, required 42 stages lasting from winter of one year (DHEW issues program guidance memorandum, stage 1) through summer 18 months later (USOE Bureau obligates funds, stage 42). With regard to the NIE, he concludes that "..the constantly changing political and fiscal context in which the NIE has had to (and continues to) work has prevented any stable system of program budgeting and related procedures from emerging." (B-74).

16. The Institute changed the OE policy from supporting the educational labs and centers to support of specific programs or projects in order to reduce the dependency of these organizations on a single government funding agency. If carried out, a concentrated resource policy was believed likely to make the R&D producing institutions too dependent on the ups and downs of Federal funds and at the same time, might lead to weak self-analysis, insensitivity to consumers, and stagnation. Also, it might capture too much R&D money, reducing the infusion of new ideas and interests into educational research. Suggesting that too low a proportion of R&D money may be available from the NIE might seem inconsistent with this reasoning. It may be: perhaps there is a difficult-to-resolve dilemma between the constituency-building aspects of resource concentration and the knowledge-building and research utilization aspects of a freer market for funds and for researchers. Are there other ways besides "throwing money at a problem" to develop a constituency? The answer seems to be "yes". Support for an

agency can develop when the agency chief is an advocate for approaches in which a constituency believes, shows a sensitivity to constituency needs and problems, goes to where the constituency is building support, and speaks out in ways congruent with a constituency's position. Support can develop when the agency provides leadership in an area, bringing people together to share ideas and develop new approaches to solving problems of mutual concern. Another way is early involvement by representatives of various audiences in planning, and continued participation of opinion leaders in agency activities. Many constituencies understand that with a limited budget, not everyone can receive $500,000; they also insist, however, on an equal chance to compete for the available funds, and that the agency listen to their concerns, showing an understanding of the problems which they face in choice of priorities and activities.

All this the Institute has tried to do, with increasing success as shown by the gathering support of organizations for the NIE; during FY1975 budget hearings, over 24 organizations wrote to Congress urging continued funding for the NIE.

17. Constance Holden, in Science, Vol. 187, February 7, 1975, pp.413-416 reviews the political and legislative history of the NIE, under, "Beleagured Institute has a Stormy Past, a Cloudy Future." She reports, "NIE administrators, however, are sounding considerably more optimistic than they were a few months ago... There (appears) to be widespread feeling that the basic concept of a federal R&D establishment for education is a sound one... Inasmuch as education in America is a $100 billion a year enterprise, it seems as though a few more people ought to be given the wherewithal to sit around and think about how to improve things." Holden concludes, "Those who envisioned NIE as a small, pristine research outfit free from political concerns will have to cancel their dreams. But NIE may be the country's best hope for giving educational research the multi-diciplinary underpinings as well as high quality brainpower that it needs to become a respective and productive undertaking."

18. Clark, op. cit., p. 2. Next sections are also quoted from Clark.

19. Lehming, Craig and Mason, commenting on an earlier draft, "A vision which will produce Congressional support may be one which eliminates or reduces the possibility of solving the relevant problems. There are major scientific and organizational issues concerning how to advance knowledge and solve problems and how to organize the scientific enterprise to make this possible. Solving the political problem of survival is a necessary but not sufficient condition for achieving our objectives."